

Applicant: Mätzler et al.
Application No.: 10/535,694

IN THE DRAWINGS

Please add new Figure 3 to the drawings as shown on the attached Replacement Sheet 2/2, and replace sheet 1/2 with the attached Replacement Sheet which now indicates that it is sheet “1/2”.

In Figure 3, a flow chart has been added to illustrate the steps recited in claim 1.

REMARKS

Claims 1-4 are currently pending in this application, as amended. By the present amendment, claims 2 - 4 have been amended. Additionally the specification and drawings have been amended as noted above. No new matter has been introduced into the application by these amendments.

In the Action, the drawings were objected to as not showing every feature of the invention specified in the claims. In particular, the method of forming the screw was not shown. In response, applicant has added Figure 3 and has made appropriate amendments to the Specification at paragraphs [0015.1] and [0019] in order to refer to newly added Figure 3. Figure 3 is fully supported by the description at paragraphs [0018] and [0019] as well as original claims 1-4. Accordingly, applicant respectfully submits that no new matter has been introduced into the application by these amendments. Accordingly, withdrawal of the objection to the drawings is respectfully requested.

Claim 2 was objected to based on a minor formality. Applicant has amended claim 3 as noted above, accordingly, withdrawal of the objection to claim 3 is respectfully requested.

Claims 1 and 3 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. 2,084,079 to Clark. The action notes that the stock steel material in Clark is

considered "ultrahigh-strength" since there is no reference value. Applicants respectfully traverse this rejection.

Claim 1 is directed to a method for producing a screw provided with an interior engaging member and includes the steps of using ultrahigh-strength steel as a source material and cold forming the screw including the interior engaging member from the source material. Claim 3 is directed to a screw for indexable inserts which comprises ultrahigh-strength steel formed with the head having an interior engaging member by way of cold forming.

As shown in the attached article from www.key-to-steel.com, ultrahigh-strength has an accepted industry meaning of steels which have a yield strength over 560 MPa. These are also commonly referred to as super alloys.

In the present case, contrary to conventional wisdom, applicants have determined that a cold formed ultrahigh-strength steel screw can be produced, including the interior tool engaging member in the head through cold forming. While applicants clearly do not question that Clark discloses cold forming a screw head, it is clear that the disclosed screw of Clark is not formed from ultrahigh-strength steel based on the age of the reference as well as the fact that the conventional wisdom in the art taught against the cold forming of screws from ultrahigh-strength steel due to the brittle nature of the material resulting in stress fractures and/or cracking during formation. Thus, the conventional wisdom in the

Applicant: Mätzler et al.
Application No.: 10/535,694

art required ultrahigh-strength steel screws to be produced through a cutting process which results in a higher cost as well as a lower strength due to various factors, and in particular, as noted in the specification that the interior engaging member in the head had to be pre-drilled into the interior of the head resulting in a lower strength, deeper cut. While Clark would clearly be applicable to a mild, low-carbon steel or perhaps even a higher strength steel material, it clearly would not have been considered by a person of ordinary skill in the art to be applicable to ultrahigh-strength steels. To the extent that this is clearly not disclosed by Clark, withdrawal of the Section 102(b) rejection of claims 1 and 3 in view of Clark is respectfully requested.

Claims 2 and 4 were rejected under 35 U.S.C. §103(a) as unpatentable over Clark in view of U.S. 3,811,872 to Snape. Snape is cited as disclosing a high strength steel including C, Mo, Ni, Co, Ti, Al and Fe. Applicants respectfully traverse this rejection.

As amended, claims 2 and 4 are now directed to the specific composition consisting of: C 0.03, Mo 5.0, Ni 18.5, Co 8.5, Ti 0.6, Al 0.1, moiety Fe. This is not the composition disclosed by Snape due to Snape's high chromium content. Additionally, there is no showing that Snape is an ultrahigh-strength steel alloy.

In view of these differences, withdrawal of the Section 103 rejection of claims 2 and 4 is respectfully requested.

Applicant: Mätzler et al.
Application No.: 10/535,694

If the Examiner believes that any additional minor formal matters need to be addressed in order to place the present application in condition for allowance, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing Amendments and Remarks, applicants respectfully submit that the present application, including claims 1-4, is in condition for allowance, and a Notice to that effect is respectfully requested.

Respectfully submitted,

Mätzler et al.

By /Randolph J. Huis/
Randolph J. Huis
Registration No. 34,626
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103
RJH/dmm
Enclosures